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**1. Voodoo Banshee Features**

General Features

- Fully integrated 128-bit VGA/2D/3D/Video Accelerator
- Ultimate 3D experience with 100 Mpixels/sec and 4 Million triangles/sec
- No-compromise 3D image quality at frame rates
- Optimized for software DVD acceleration (Optional)
- Full VMI interface (including a host port) for optional:
  Full hardware DVD decoding, Video capturing, TV tuner support
- High-resolution 1600x1200 85Hz with a 230MHz RAMDAC
- PC97 and PC98 rev 1.0 compliant
- VESA DDC2B support

2D Acceleration

- Full featured 128-bit BitBlt Engine & Windows GUI Acceleration
- Source and Destination Chroma-keying for DirectDraw

3D Acceleration

- Full hardware setup of triangle parameters
- 16-bit integer and floating-point Z-buffering with biasing
- Transparency and chroma-key with dedicated color mask
- Alpha blending on source and destination pixels
- Sub-pixel and sub-texel correction to 0.4x0.4 resolution
- 24-bit color dithering to native 16-bit RGB
- Per-pixel atmospheric fog with programmable fog zones
- Polygon edge anti-aliasing
- Perspective correct (true divide-per-pixel) 3D texture mapping
- True per-pixel, LOD MIP mapping with biasing and clamping
- High performance bilinear and trilinear filtering
- RGB modulation/addition/blending combines textures and shaded pixels
- Texture compositing for multi-texture special effects
- Support for 14 texture map formats
- 8-bit paletted textures with full bilinear filtering
- Texture compression through narrow-channel YAB format

Video Acceleration

- Multiple video window support
- Bilinear horizontal and vertical filtering
- YUV 4:2:2, and YUV 4:2:0 planar support

Host Interface

- High performance AGP interface including optimized support for
  sideband addressing and pipelining
- FIFO optimized for high speed bursting of geometry and texture data
- Optimized for Pentium II IO architecture

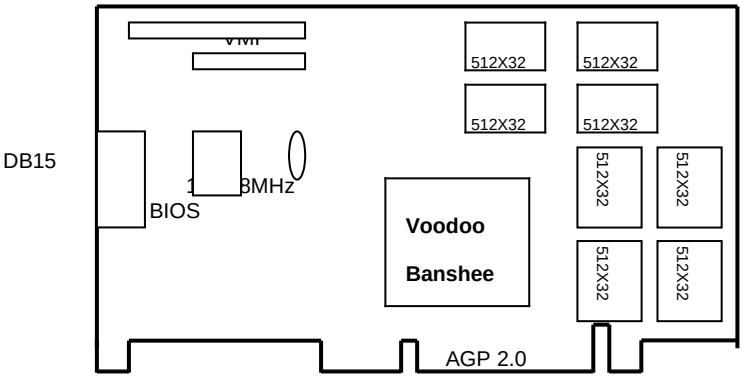
Memory System

- Advanced architecture with 1.6 GB/sec memory bandwidth
- Support 8/16 MB SGRAM Frame buffer
- Software support Windows95/98 & NT4.0

**2.** Board Outline

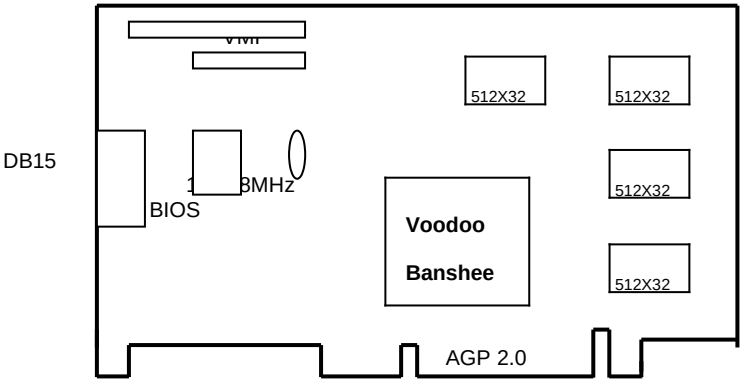
**SP3800 using SGRAM**

16MB on board, board size: 161 x 108 mm.




**SP3800C using SGRAM**

16MB on board, board size: 151 x 88 mm. (another 4 pieces SGRAM on solder side)



## 3. Hardware Installation

### 3.1 Package Contents

1. Voodoo Banshee Accelerator card.
2. CD title or Software diskettes
3. This manual.

### 3.2 Installing the Card

1. Turn off your computer.
2. Remove the cover of the computer per the owner's manual.
3. Install the card in the AGP bus slots.
4. Replace the cover.

### 3.3 Resolutions and colors supported:

Voodoo Banshee with 16MB are fully compatible VGA with the addition of Hi-Color and True Color modes depending on the amount of video memory stalled. The amount of memory needed to display various resolutions is shown below

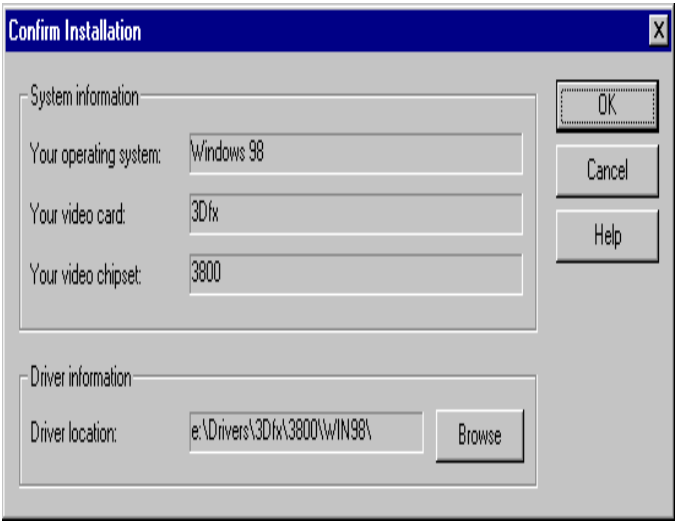
**Voodoo Banshee**

| Resolution & Colors | BPP | Refresh Rate (HZ) |
|---|---|---|
| 640x480-256c | 8 | 60/75/85/100/120 |
| 640x480-64Kc | 16 | 60/75/85/100/120 |
| 640x480-16Mc | 24 | 60/75/85/100/120 |
| 640x480-4Gc | 32 | 60/75/85/100/120 |
| 800x600-256c | 8 | 60/75/85/100 |
| 800x600-64Kc | 16 | 60/75/85/100 |
| 800x600-16Mc | 24 | 60/75/85/100 |
| 800x600-4Gc | 32 | 60/75/85/100 |
| 1024x768-256c | 8 | 60/70/75 |
| 1024x768-64Kc | 16 | 60/70/75 |
| 1024x768-16Mc | 16 | 60/70/75 |
| 1024x768-14Gc | 32 | 60/70/75 |
| 1280x1024-256c | 8 | 60 |
| 1280x1024-64Kc | 16 | 60 |
| 1280x1024-64Kc | 24 | 60 |
| 1280x1024-4Gc | 32 | 60 |

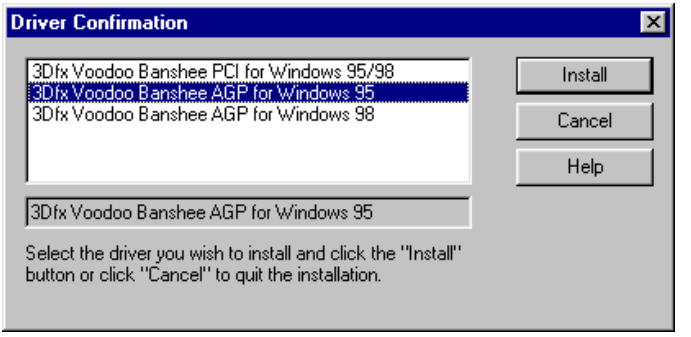
**4. Smart Installation**
**For windows95 osr2, windows98, windowsNT4.0 SP3**
**4.1** Put the Smart Installation CD in your CD-ROM

**4.2** Select the **language** for you.
Then Select the **Driver installation**

**4.3** Click the **Confirm Installation…**button.
Then Select the **OK**




**4.4** Click the **Driver Confirmation**
Then Select the **Install**




**4.5 Then restart your computer.**

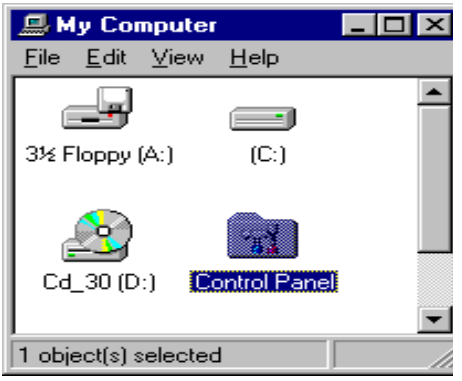
**5. Manually install Windows 95 & Windows 98 drivers**

**5.1 Installation and Setup**

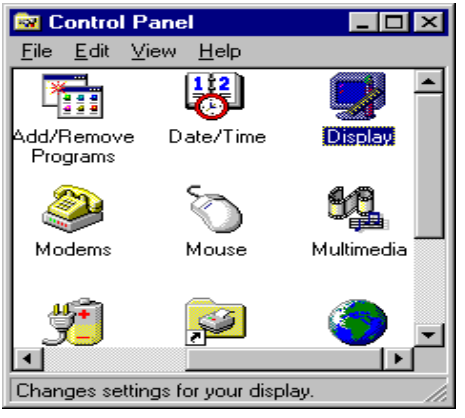
**5.1.1 Windows95**

The Windows setup program installs and modifies all of the necessary files. Follow these steps to install the Windows 95 driver.

- Insert the “Window 95 Driver” Installation Diskette or DISC (CD Title Driver).
- Select **Control Panel** from **My Computer** group.



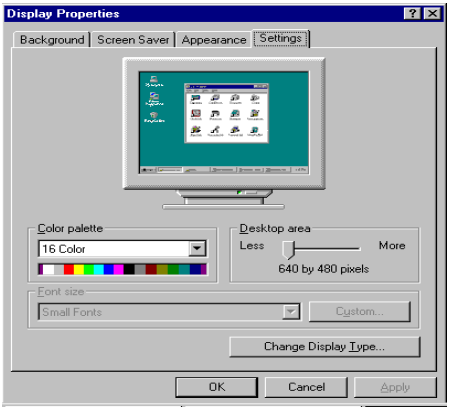

- Select the **Display** icon



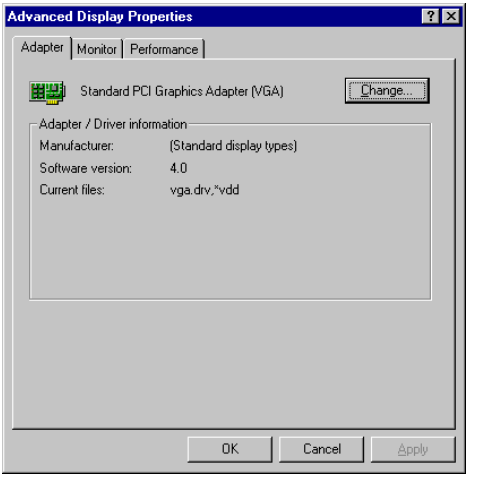

- Double-click on the **Display** icon in the Setting -> **Control Panel** folder. You can

also click the right mouse button anywhere on the desktop and select the Properties option form the pop-out menu.

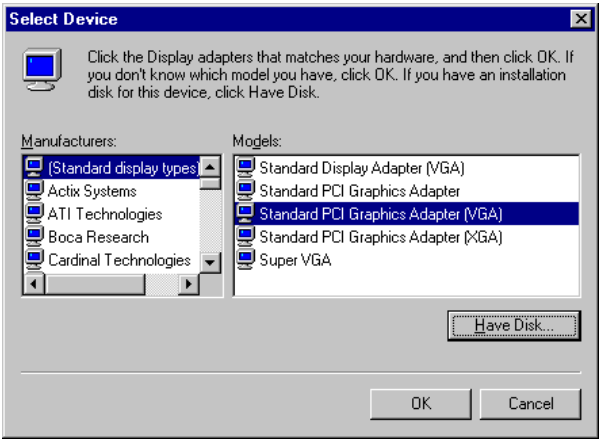
- Click the **Settings** tab.




- Click the **Change Display Type** button.

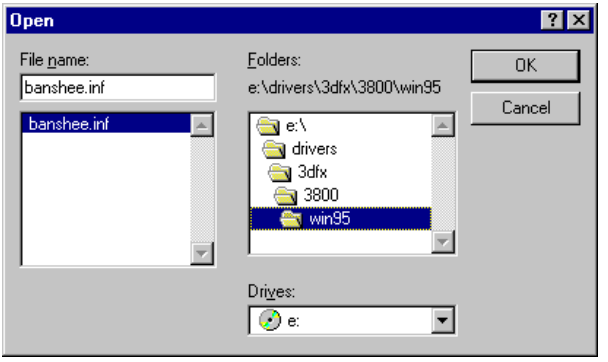


- Click the **Have Disk** button.




- Change directories and Select **banshee.inf**.

Diskette is **A: or B:\ WIN95 , Disc** (CD Title) is **E:\drivers\3dfx\3800\WIN95 ("A:" or "B:"→** Diskette Drive **"E:"→**CD Drive **"3800"→**VGA model name**)**

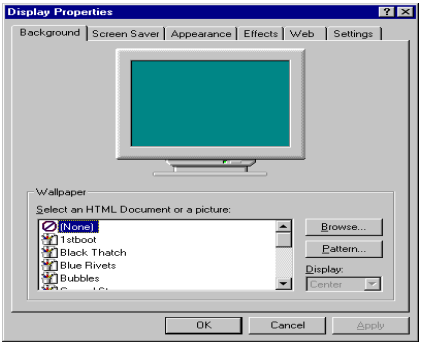



- Select **3800 AGP** driver form the list and click the **OK** button. If a message stating that one or more driver files is older than the files on the system respond **YES** to overwrite the files.
- Click the Close button and Apply button, and restart your computer.

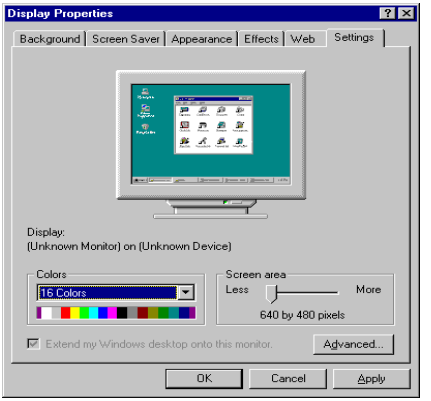
### 5.1.2 Windows98

- Select **Control Panel** from **My Computer** group.

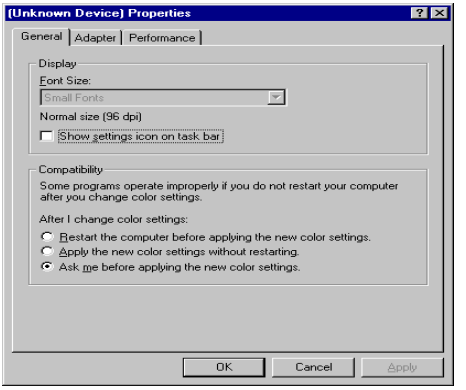
- Select the **Display** icon



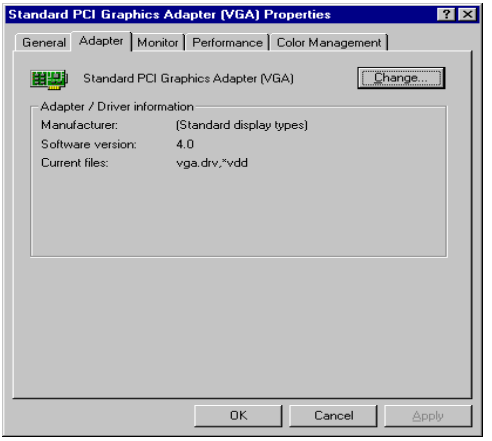
- Double-click on the **Display** icon in the Setting -> **Control Panel** folder. You can also click the right mouse button anywhere on the desktop and select the Properties option form the pop-out menu.
- Click the **Settings** tab.



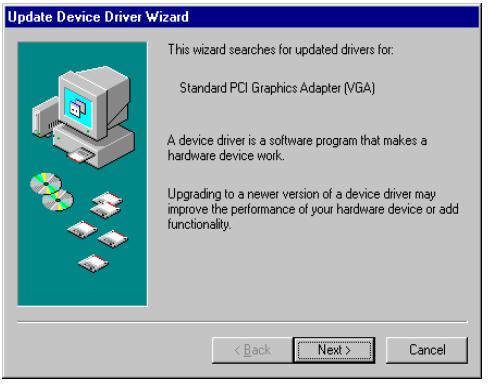

- Then show **[Unknown Device.] Properties** tab
  Select **Adapter**



- Then show **Standard PCI Graphics….** Tab
  Select **Change**



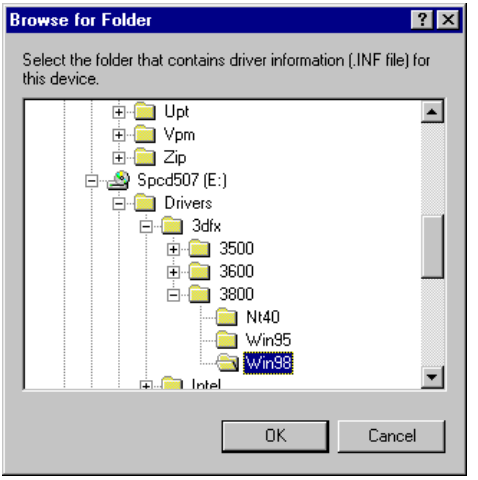

- Then show **Update Device ….** tab
  Select **Next**



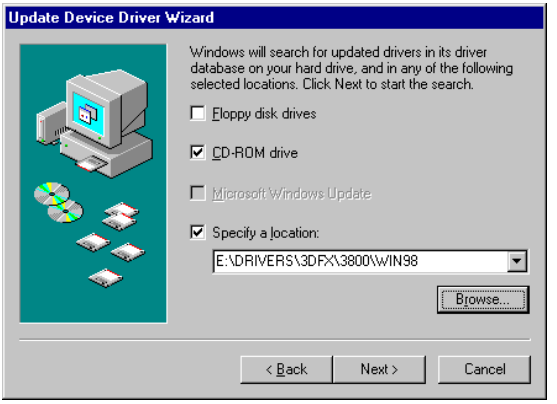
- Then show **Update Device ….** tab
  Select **Search for a better……**
  Then select **Next.**

- Then show **Update Device ….** tab
  If the **Specify a location** is wrong
  Please select **Brows**

- Then show **Browse for Folder** tab
  Select **D:\Drivers\3DFX\3800\Win98**
  Then select **OK**

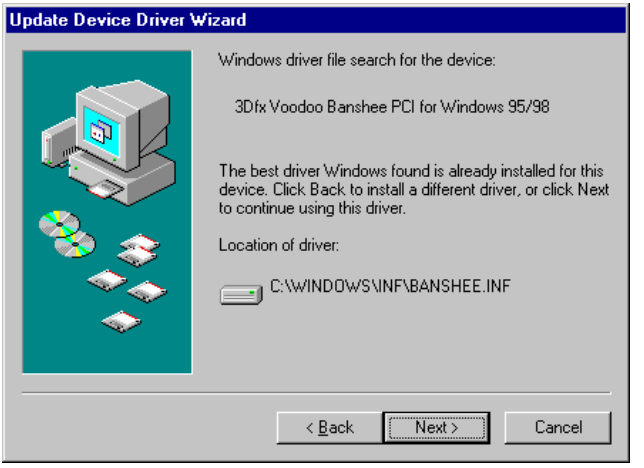



- Then show **Update Device Driver Wizard** tab
  Select **CD-ROM driver**
  Click the **Specify a locator,** if right
  Then select **Next**

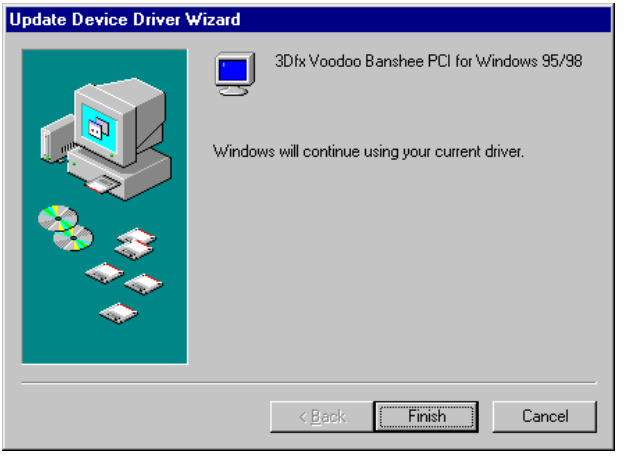



- Then show **Update Device Driver Wizard** tab

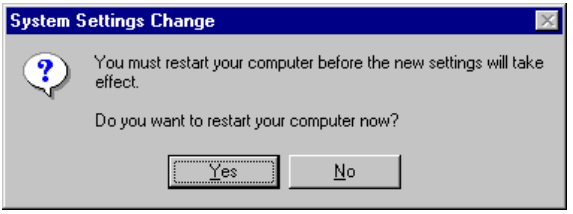
Select **Next**




- Then show **Update Device Driver Wizard** tab
  Select **Finish**

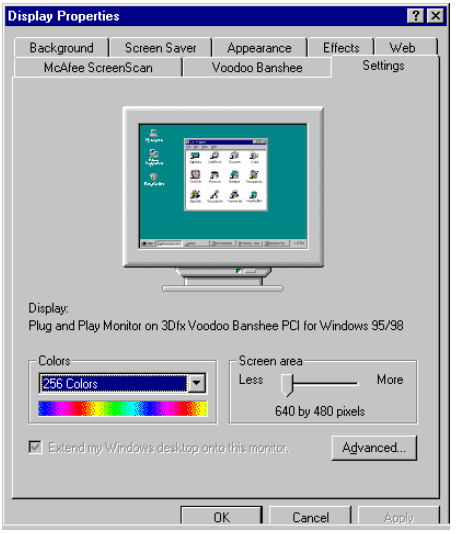


- Then show **System Settings Change** tab
  Select **OK**



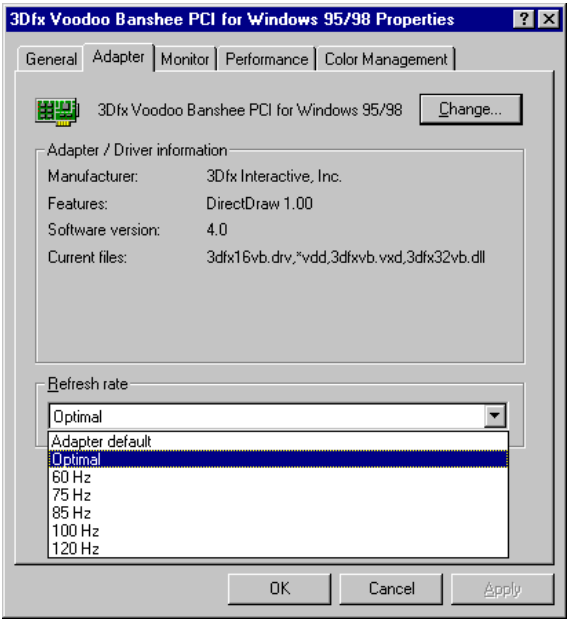

### 5.2 How to change Color Depth and Resolution

1 Make sure that you have installed the **WINDOWS95** Driver.
2. Click on the **Start** box in the lower left corner and proceed to **Control Panel**.
3. Inside the **Control panel** group , click on **Display** icon to open the **Display Properties** folder and select the **Setting table**
4. Click on the pull-down arrow from the **Color** palette area to select color depth or adjust the sliding bar to either **Less** or **More** from the **Desktop area**
5. Select **OK** to restart **WINDOWS95** and new color depth or the new resolution takes effect.



### 5.3 How to change Refresh Rate

1. Make sure that you have installed the **WINDOWS95** Driver. Click on the **Start** box in the lower left corner and proceed to Setting, **Control Panel**
2. Inside the **Control panel** group , click on **Display** icon to open the **Display Properties** folder and select the **S3 Refresh table**
3. Click on the **Change Configuration** to change refresh rate
4. Select **OK** and new refresh rate takes effect




- **Refresh Rate default is Optimal .**
- **If you change Refresh Rate from Optimal to another , you must be to restart WINDOWS 95**
- **Be sure your monitor can support DDC functions(or it is Plug & Play monitor) ,otherwise you can not select refresh rate.**

**6. WindowsNT4.0**

The following steps describe how to install WIN NT 3.51 and 4.0 display drivers

1. Select **Control Panel** from the **Main** group.
2. Select the **Display** icon.
3. Select C**hange Display Type**.
4. Select Change from the **Adapter Type** area.
5. Select **Other**.
6. Place the **WINDOWS NT** Installation Disk or Disc (CD Title) into Driver. Click **OK**.
7. Select I**nstall** and click "**YES**" when the Installing Driver dialog box appears.
8. When the WINDOWS NT **Setup** dialog box appears select driver A or CD ROM, and click "**Continue**".

A message appears stating that drivers were successfully installed. Click **OK**. Another message appears stating that the driver could not be restarted dynamically. Restart **Windows NT** to run the new driver. Click **OK.**

**FCC Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two condition.(1).this device may not cause harmful interference. (2).this device must accept any interference received, including interference that may cause undesired operation

Warning:
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, used and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference in to radiate communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different form that to which the receiver in connected.
- Consult the dealer or an experienced radio/TV technician for help.

Notice:
(1) An Unshielded-type power cord is required in order to meet FCC emission limits and also to prevent interference to the nearby radio and television reception. It is essential that only the supplied power cord by used.
(2) Use only shielded cables to connect I/O devices to this equipment.3
(3) Changes or modifications not expressly approved by the party responsible for compliance could void the use's authority to operate the equipment.

**Trademark Acknowledgments**

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